

REMARKS

This Amendment is submitted in reply to the Non-Final Office Action dated January 10, 2008, in which claims 1-10 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Linard et al. (US statutory invention registration H1776) in view of Blake et al. (US 5,648,329). In view of the following remarks, the application with pending claims 1-10 and 14 are in condition for allowance. Reconsideration and notice to that effect are respectfully requested.

Rejections under 35 U.S.C. § 103(a)

In the Office Action, claims 1-10, 14 were rejected as being unpatentable over Linard et al. in view of Blake et al. Applicants respectfully traverse this rejection.

Claim 1 recites a liquid enzyme cleaning composition including about 10% to about 20% by weight of a boric acid salt that provides a detergent enzyme that retains 80% of its enzyme activity at ambient temperature for at least 30 days after forming the composition. Linard et al. is directed to an enzyme-containing liquid detergent that contains between 1% and 10% by weight boron compounds. During the prosecution of the parent application of the present application, Serial Number 09/606,478, now U.S. Patent Number 6,624,132, Applicants submitted a declaration of Victor Man distinguishing Linard et al. from the present invention on the grounds that the compositions in Linard et al. had poor physical stability. In fact, the physical stability of the Linard et al. compositions was so poor that the enzyme stability of the compositions could not be determined. A copy of the Man declaration is attached. In the Notice of Allowance mailed May 6, 2003, the Examiner stated that U.S. H1776, alone or in combination did not teach, disclose, or suggest the liquid enzyme cleaning composition of the invention and that the obviousness rejection had been rendered moot because of the Man Declaration. See the Statement for Reasons for Allowance of May 6, 2003, a copy of which is attached. The Examiner went on to state that the declaration demonstrated that the compositions in Linard et al. did not possess enough physical stability for a meaningful determination of enzyme stability and therefore, would not have rendered the invention obvious to a person skilled in the art. The statements in the Man Declaration

and the Notice of Allowance remain true for the present invention. Applicants believe that the Man Declaration describes the unexpected results of the present invention.

Blake et al. do not remedy the shortcomings of Linard et al. Blake et al. is directed to a high active premix. Blake et al. do not teach a stable liquid enzyme composition with high amounts of water. The only mention of the weight percentage of water in the premix of Blake et al. is 16% (Col. 5, Example 3). By contrast, claim 1 recites a liquid cleaning composition comprising between 40% to about 85% by weight water. As stated in the specification, "Thus, the concentration of water in the present stabilized enzyme cleaning composition can be, for example, from about 40 weight percent to about 85 percent weight water, from about 40 weight percent to about 75 weight percent water, from about 60 to about 85 weight percent water, from about 60 to about 75 weight percent water, e.g., 40% to 69-72% by weight water. For example, the concentration of water in the present stabilized enzyme cleaning composition can be in a range from at least about 40%, 41%, 42%, 43%, 44%, 45%,...80%, 81%, 82%, 83%, 84%, 85% by weight water (always selecting an upper limit that is greater than or equal to the lower limit)." (Page 10, lines 9-20). Thus, claim 1 recites a composition containing about 40% by weight water, or at least 24% more than the single weight percentage of water disclosed in Blake et al. In the Office Action dated May 3, 2007, the Examiner stated that previous rejections of the claims as being unpatentable over Linard et al. in view of Blake et al. were withdrawn upon further review. The previous reconsideration and withdrawal of the rejection of the claims as being unpatentable over Linard et al. in view of Blake et al. remain true for the present invention.

Accordingly, it is respectfully requested that the rejection of claim 1 should be withdrawn and claim 1 allowed. In that claim 1 is in condition for allowance, the rejections of claim 2-10 and 14, which depend therefrom, should be withdrawn and claims 2-10 and 14 allowed.

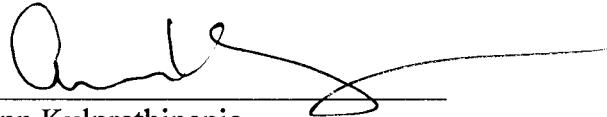
Conclusion

In summary, pending claims 1-10 and 14 are believed to be patentable for at least the reasons described above. Reconsideration and notice to that effect are respectfully requested.

If there are any remaining questions, the Examiner is requested to contact the undersigned at the number listed below.

Respectfully submitted,

FAEGRE & BENSON LLP

By: 

Ann Kulprathipanja
Reg. No. 50,608
2200 Wells Fargo Center
90 South 7th Street
Minneapolis, MN 55402
612/766-8368

Dated: April 10, 2008

Attachments

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APPENDIX

- Declaration of Victor Man (executed April 3, 2003)
- Statement of Reasons for Allowance (mailed May 6, 2003)

S/N 09/606,478

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	MAN ET AL.	Examiner:	B. ELHILO
Serial No.:	09/606,478	Group Art Unit:	1751
Filed:	JUNE 29, 2000	Docket No.:	163.1357US01
Title:	STABLE LIQUID ENZYME COMPOSITIONS WITH ENHANCED ACTIVITY		

Declaration of Victor Man

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

I, Victor F. Man, Ph.D., declare as follows:

1. I am an inventor of the above-identified patent application and an employee of Ecolab, Inc., the assignee of the above-identified patent application. I have a B.S. in Chemistry from the University of Wisconsin-Oshkosh and a Ph.D. in Chemistry from the University of Wisconsin-Madison. My title at Ecolab is Senior Scientist. I have been an employee of Ecolab, Inc. for 13 years.
2. I have authored 8 scientific publications. I have 13 years of experience developing cleaning compositions and am an inventor on 26 patents. In particular, I have approximately 5 years of research and development experience with enzyme containing cleaning compositions.
3. I have read and understood the Office Action mailed January 2, 2003 in this patent application. I understand that the Examiner suggests showing results with compositions of this invention that are unexpected compared to the compositions disclosed in the Linard et al. reference. The following experiments were conducted under my supervision.
4. The present patent application includes Examples at pages 43-46 and Figures 1-3 that established that the presently claimed compositions increase stability and activity of detergent enzymes.
5. We made the following compositions according to the Linard et al. reference and including up to 10 wt-% borate salt (Table).

Table

Ingredient	Borax Composition 1 (Wt-%)	Borax Composition 2 (Wt-%)	Borax Composition 3 (Wt-%)
Borax Pentahydrate	3.06	6.5	10
Deionized Water	56	53	49
CaCl ₂ (to provide for 0.01 % Ca ⁺⁺)	0.04	0.04	0.04
Sodium LAS Flake	10	10	10
Sodium LES	6	6	6
Neodol 25-9	8	8	8
Ethanol	0.8	0.8	0.8
MEA	2	2	2
TEA	2	2	2
Propylene Glycol	4	4	4
Sodium Citrate Dihydrate	7	7	7
Alkaline Protease	1	1	1
Total	100	100	100

The Linard et al. reference discloses employing a sodium salt of boric acid, borax pentahydrate, as the borate. Borax Composition 1 includes 3.06 wt-% borax, which is the same as in the Linard et al. Composition Number 1 (found in the table at column 9, line 50, through column 10, line 10, of Linard et al.). Borax Composition 2 includes 6.5 wt-% borax. Borax Composition 3 includes 10 wt-% borax. The other ingredients are according to Composition Number 1 of the Linard et al. reference.

6. A meaningful evaluation of the stability of the enzyme in the Linard et al. borax compositions required that these compositions be physically stable for the duration of the evaluation of enzyme stability. By physically stable, we mean that components of the composition do not separate or form precipitate. Therefore, we first determined whether the Linard et al. borax compositions would be physically stable during any enzyme stability test. If the Linard et al. borax compositions are not physically stable, they are not suitable for a meaningful determination of their enzyme stability over time.

7. Each of the Linard et al. borax compositions was allowed to sit at ambient temperature in a closed container for two days. Each of the Linard et al. borax compositions formed a precipitate by the end of those two days. The borax pentahydrate came out of solution. At higher concentrations (6.5 wt-% and 10 wt-%), it was very apparent that most of the borax pentahydrate did not go into solution. I conclude from this that the Linard et al. borax compositions do not possess sufficient physical stability for a meaningful determination of their enzyme stability over time.

8. Also, it cannot be over-emphasized that liquid compositions of the Linard et al. reference, with such poor physical stability, have very limited, if any, commercial viability.

9. In contrast, the compositions described in the present claims are physically stable and maintain enzyme stability during prolonged storage. This result is unexpected in light of the physical instability of the Linard et al. borax compositions.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the likes so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

4 / 3 / 2003
Date

By Victor F. Man
Victor F. Man, Ph.D.

DETAILED ACTION

- 1 This action is responsive to the remarks filed on 4/4/2003.
2 Claims 1-7, 9-18, 20-28, 30-40 and 42-50 are allowed.

STATEMENT OF REASONS FOR ALLOWANCE

- 3 The following is an examiner's statement of reasons for allowance:

The closest prior art of record (US H1776) alone or in combination does not teach, disclose or suggest a liquid enzyme cleaning composition comprising a surfactant, detergent enzyme, boric acid salt and water wherein the boric acid salt remaining dissolved in the cleaning composition at room temperature and wherein the liquid enzyme cleaning composition is formulated to provide detergent enzyme that retains about 100% of its initial activity at ambient temperature for at least 11 months after forming the composition. Further, the obviousness rejection over Linard (US' 776) has been rendered moot because of a declaration filed on 4/4/03, which is sufficient to rebut any case of prima facie of obviousness of the claimed ingredients. Although Linard teaches a detergent composition comprising borax pentahydrate as an alkali metal borate, the declaration has demonstrated the instability of Linard et al. borax compositions over time due to the formation of the precipitate and therefore, the Linard borax compositions do not possess sufficient physical stability for a meaningful determination of their enzyme stability over time as shown in the declaration. Accordingly, the claimed subject matter, as a whole would not have been obvious to one having ordinary skill in the art of liquid enzyme cleaning formulation with stability and enhanced activity.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue


Art Unit: 1751


fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (703) 305-0217. The examiner can normally be reached on M - F (7:30-5:00) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (703) 308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Elhilo
April 28, 2003


YOGENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700